

PATENT ABSTRACTS OF JAPAN

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(30)Priority

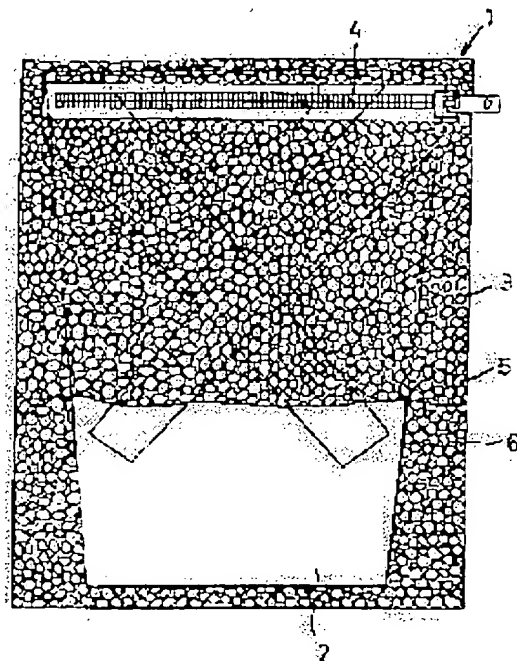
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(54) WASHING AUXILIARY FIXTURE

(57)Abstract:

PROBLEM TO BE SOLVED: To keep laundry from being moved with respect to a net to prevent the occurrence of shrinkage and creases by providing a water permeable member made of cellular plastic having open cells dispersed in the plastic main body in a washing auxiliary fixture covering laundry with a sheet-like water permeable member having flexibility.

SOLUTION: A washing auxiliary fixture 1 is formed by a storing bag 3 for laundry 2 and a fastener 4 for opening and closing an opening formed in the vicinity of one peripheral edge on one face of the storing bag 3, and the storing bag 3 is formed by a first sheet-like water permeable member 5 having flexibility and a second sheet-like water permeable member 6 having flexibility. The peripheral edge parts of the water permeable members 5, 6 are connected to each other by sewing to each other along the rectangle with a thread or by heat welding. In this case, the water permeable members 5, 6 are made of cellular plastic having open cells dispersed in the plastic main body having elasticity.



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CLAIMS

[Claim(s)]

[Claim 1] It is the auxiliary implement for wash which is equipped with a sheet-like water flow nature member which has flexibility, and is made a product made from foamed plastics which has an open cell with which the water flow nature member was distributed in a main part of plastics in an auxiliary implement for wrap wash in the washing by the water flow nature member.

[Claim 2] A part of contact section [at least] with the washing of said main part of plastics is the auxiliary implement for wash according to claim 1 used as the free end of the shape of a cantilever in which connection for the washing is possible.

[Claim 3] An auxiliary implement for wash according to claim 1 or 2 with which some storage bags [at least] of the washing are constituted by the water flow nature member.

[Claim 4] So that it can wind in the shape of a roll in one, where the washing and a water flow nature member are piled up Or so that it can turn up in one Or the water flow nature member has flexibility, and were wound in the shape of [the] a roll so that it could turn up, while winding in the shape of a roll in one. Or an auxiliary implement for wash given in any in claims 1-3 in which a means by which the washing turned up while being turned up or wound in the shape of a roll, and a water flow nature member regulate that it can extend is formed they are.

[Claim 5] For 5 - 100 kg/m³ and the number of air bubbles, bulk density is [said water flow nature member] an auxiliary implement for wash given in any in claims 1-4 it is [claims] 3-30mm 10-150 per 25mm of the water flow nature member surface and thickness are.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] This invention relates to the auxiliary implement for wash at the time of washing the washing in cold water with a washing machine.

[0002]

[Description of the Prior Art] Since the wash network used in case the washing is conventionally in cold water with a washing machine consists of filaments fabricated reticulated, manufacture takes time and effort to it and it has the problem from which reduction of a manufacturing cost is prevented. Moreover, the washing contracts within a wash network or there is a problem which a wrinkling produces by mold collapse. Then, contraction of the washing and prevention of mold collapse are proposed by wash in the condition of having rolled the washing and a network in the shape of a roll (JP,5-13380,U). However, the washing runs only by having rolled the washing and a network in the shape of a roll to a network, and neither contraction nor generating of a wrinkling can fully be prevented by it. This invention aims at offer of the auxiliary implement for wash which can solve the above-mentioned problem.

[0003]

[Means for Solving the Problem] An auxiliary implement for wash of this invention is equipped with a sheet-like water flow nature member which has flexibility, and it considers as a product made from foamed plastics which has an open cell with which the water flow nature member was distributed in a main part of plastics in an auxiliary implement for wrap wash in the washing by the water flow nature member. As for a part of contact section [at least] with the washing of the main part of plastics, it is desirable to consider as the free end of the shape of a cantilever in which connection for the washing is possible. Since a water flow nature member is made into a product made from foamed plastics which has an open cell according to this invention, compared with a network formed from a filament, it can manufacture easily.

[0004] Moreover, so that it can wind in the shape of a roll in one, where the washing and a water flow nature member are piled up Or so that it can turn up in one Or the water flow nature member has flexibility, and were wound in the shape of [the] a roll so that it could turn up, while winding in the shape of a roll in one. Or while being turned up or wound in the shape of a roll, it is desirable that a means by which the turned-up washing and a water flow nature member regulate that it can extend is established. By at least a part being used as the free end of the shape of a cantilever in which connection for the washing is possible by this, connection by the washing becomes enough and can prevent more certainly contraction of the washing under wash, and generating of a wrinkling by mold collapse.

[0005]

[Embodiment of the Invention] Hereafter, the 1st operation gestalt of this invention is explained with reference to drawing 1 - drawing 4 . The auxiliary implement 1 for wash shown in drawing 1 consists of a storage bag 3 of the washing 2, and a fastener 4 which open and close the opening formed near the round edge in the whole surface of the storage bag 3. The formation location of a opening may be

formed in the mid-position of the periphery which carries out phase opposite in the whole surface of a storage bag 3, and may be formed along a round edge. A fastener 4 is sewn with thread by the storage bag 3. In order to wash the washing 2 using the above-mentioned auxiliary implement 1 for wash, first, the washing 2 is put into space 3a in a storage bag 3 from an opening, a fastener 4 closes the opening, and after an appropriate time, the washing 2 and the auxiliary implement 1 for wash are put into a washing machine, and are washed in cold water.

[0006] The storage bag 3 consists of a sheet-like 1st copy aquosity member 5 which has flexibility as shown in (1) of drawing 2, and a sheet-like 2nd copy aquosity member 6 which has flexibility, and the washing 2 is covered with both the water flow nature members 5 and 6. Along with a rectangle, it is mutually sewn on by thread, or the periphery section of both the water flow nature members 5 and 6 is mutually connected by heat joining. When both the water flow nature members 5 and 6 have flexibility, where it could contain the washing 2 to the storage bag 3 easily and the water flow nature members 5 and 6 and the washing 2 are piled up, it can wind in the shape of a roll in one, or can fold.

[0007] As shown in drawing 3 and drawing 4, let each water flow nature members 5 and 6 be the products made from foamed plastics which have the open cell 11 distributed in the main part 10 of plastics which has elasticity. As the foamed plastics, foaming polyurethane, form polystyrene, a foaming polyether, polypropylene foam, etc. can be used. 10-150 per 25mm of the water flow nature member surface and thickness of bulk density are [the number of 5 - 100 kg/m³ and air bubbles 11 / 3-30mm] desirable, and 13-70 per 25mm of the water flow nature member surface and thickness of bulk density are [the number of 20 - 50 kg/m³ and air bubbles 11 / 5-20mm] more desirable [each water flow nature members 5 and 6]. When three or more 5 kg/m and the number of air bubbles are [150 or less per 25mm of the water flow nature member surface and thickness] 3mm or more, bulk density especially each water flow nature members 5 and 6. The endurance improves and bulk density is 100 kg/m³. When the number of air bubbles is ten or more per 25mm of the water flow nature member surface and thickness is 30mm or less hereafter, since the washing engine performance of the auxiliary implement 1 for wash can be improved, it is still more desirable. In addition, as shown in the modification of (2) of drawing 2, the same network as usual may constitute 2nd copy aquosity member 6' by making the 1st copy aquosity member 5 into the product made from foamed plastics. Thus, the storage bag of the washing can be easily manufactured, when at least the part is constituted by the above-mentioned water flow nature member.

[0008] As shown in drawing 4, as for a part of contact section [at least] with the washing 2 of the main part 10 of plastics which is the inside side of each water flow nature members 5 and 6, it is desirable to consider as free-end 10' of the shape of a cantilever in which connection for the washing 2 is possible. Each water flow nature members 5 and 6 can fabricate for example, a foamed-plastics lump by cutting in the shape of a sheet, and can make the cutting section free-end 10' of the shape of much cantilever. It is desirable that a sharp cutter, or the heated wire and a cutter cut the foamed-plastics material so that tip 10a of the free-end 10'] may become acute. Since the elasticity of the main part 10 of plastics can control the relative displacement over the water flow nature members 5 and 6 of the washing 2 under wash when free-end 10' of the shape of the cantilever is caught in the washing 2, it can prevent contraction of the washing, and generating of the wrinkling by mold collapse. That is, plastic deformation and failure can be prevented with the elasticity of the main part 10 of plastics, and cantilever-like free-end 10' can continue at a long period of time, and can hook the washing. In addition, it is good for the external surface side of each water flow nature members 5 and 6 also as 10" of the cantilever-like free end in some main parts [at least] 10 of plastics.

[0009] (1) of drawing 5 shows the auxiliary implement 101 for wash of the 2nd operation gestalt of this invention. The auxiliary implement 101 for wash is equipped with the sheet-like 1st copy aquosity member 102, the sheet-like 2nd copy aquosity member 112 with an area smaller than the 1st copy aquosity member 102, and the 2nd copy aquosity member 112 and the sheet-like 3rd copy aquosity member 122 of the same area and the same configuration. In the periphery of the 2nd and the 3rd copy aquosity members 112 and 122, the periphery of the 1st copy aquosity member 102 meets a trapezoid along with a rectangle. The 2nd copy aquosity member 112 and the 3rd copy aquosity member 122

receive mutually, and are made into the mirror image.

[0010] The 2nd and the 3rd copy aquosity members 112 and 122 are arranged at one field side of the 1st copy aquosity member 102. The periphery located in the bottom left of drawing Nakagami of the 2nd copy aquosity member 112 and the periphery located in the method of the vertical right of the 3rd copy aquosity member 122 It connects with the periphery of the 1st copy aquosity member 102, and let between periphery 122a located between periphery 112a located in the method of the right of the 2nd copy aquosity member 112, and the 1st copy aquosity members 102, and in the left of the 3rd copy aquosity member 122, and the 1st copy aquosity members 102 be the entrance of the washing 2, respectively. Thereby, the washing 2 into which it was put in the auxiliary implement 101 for wash from the entrance can be covered by the water flow nature members 102, 112, and 122. It may be mutually sewn on by thread etc., you may connect, and heat joining of the periphery of the 2nd and the 3rd copy aquosity members 112 and 122 part and the periphery of the 1st copy aquosity member 102 part may be carried out mutually.

[0011] The 2nd copy aquosity member 112 and the 3rd copy aquosity member 122 are arranged so that the entrance of one of these and the entrance of another side may lap partially in drawing Nakashita one end. That is, the gap of periphery 112a of the 2nd copy aquosity member 112 and periphery 122a of the 3rd copy aquosity member 122 which constitute each entrance is gradually made small as it goes to the method of drawing Nakashita, it considers as zero in the location with which the 2nd copy aquosity member 112 and the 3rd copy aquosity member 122 lap. and the amount of laps is gradually enlarged as it goes to the method of drawing Nakashita. The 2nd copy aquosity member 112 and the 3rd copy aquosity member 122 may be arranged so that the entrance of one of these and the entrance of another side may not lap.

[0012] Each water flow nature members 102, 112, and 122 are made into the product made from foamed plastics which has the open cell distributed in the main part of plastics like the 1st operation gestalt, and let a part of contact section [at least] with the washing 2 of the main part of plastics be the free end of the shape of a cantilever in which connection for the washing 2 is possible. In addition, the 1st copy aquosity member 102 is made into the product made from foamed plastics, the same network as usual constitutes the 2nd and the 3rd copy aquosity members 112 and 122, or the same network as usual constitutes the 1st copy aquosity member 102, and it is good also considering the 2nd and the 3rd copy aquosity members 112 and 122 as a product made from foamed plastics.

[0013] Each water flow nature members 102, 112, and 122 are rolled in one in the condition of having piled up with the washing 2, by having flexibility, and as shown in drawing 6 (1), they can do the shape of a roll. Under the present circumstances, although the washing 2 and the water flow nature members 102, 112, and 122 may be rolled in the shape of [two] a roll as shown in drawing 6 (2), it is desirable to make it wind around at least three or more layers. It is regulated that the washing 2 which the rubber band 115 of the shape of a network which has water flow nature was twisted around the washing 2 rolled in the shape of a roll and each water flow nature members 102, 112, and 122, and was wound around them in the shape of [the] a roll by this, and each water flow nature members 102, 112, and 122 can extend. What was connected with the water flow nature member 102 as the rubber band 115 was shown in drawing 5 (1) could be separated from the auxiliary implement 1 for wash. A carbon button, a hook, a string, a field-like fastener, rubber, a pin, a zipper, etc. can use a means to regulate.

[0014] In order to wash the washing 2 using the above-mentioned auxiliary implement 101 for wash, the washing 2 is contained for the washing 2 to a cover and the auxiliary implement 101 for wash by the 1st copy aquosity member 102, and the 2nd and the 3rd copy aquosity members 112 and 122. Next, it regulates that the washing 2 which wound in the shape of a roll in one where the washing 2 and each water flow nature members 102, 112, and 122 are piled up, and was rolled in the shape of [the] a roll, and each water flow nature members 102, 112, and 122 can extend with the rubber band 115. In the state of the regulation, with each water flow nature members 102, 112, and 122, the washing 2 is put into a washing machine 20, and is washed in cold water. Moreover, you may regulate that the washing 2 which turned up in one so that at least one fold might be made, wound around after an appropriate time in the shape of a roll, and was rolled in the shape of [the] a roll where the washing 2 and the water flow

nature members 102, 112, and 122 are piled up, and the water flow nature members 102, 112, and 122 can extend.

[0015] According to the above-mentioned 2nd operation gestalt, can do so the same effect as the 1st operation gestalt, and the washing 2 and the water flow nature members 102, 112, and 122 are further rolled in the shape of a roll in one in piles. Or since it can wash in the condition of having turned up while turning up in one or winding in the shape of a roll in one Connection by the free end of the shape of a cantilever of the water flow nature members 102 and 112 and the 122 surface and the washing 2 becomes enough, and can prevent more certainly contraction of the washing under wash, and generating of the wrinkling by mold collapse.

[0016] (2) of drawing 5 is the auxiliary implement 200 for wash of the 3rd operation gestalt of this invention, and it shows a portion with the same sign like the 2nd operation gestalt. The auxiliary implement 200 for wash is equipped with the flexible band-like members 202 and 203 of the pair replaced with the 1st copy aquosity member 102 of the 2nd operation gestalt, the same water flow nature member 201 made from foamed plastics, and the 2nd of the 2nd operation gestalt and the 3rd copy aquosity members 112 and 122. On the water flow nature member 201, both the band-like members 202 and 203 are arranged at abbreviation parallel while each other meet drawing Nakagami down, both ends are connected to the periphery of the water flow nature member 201, and especially the connecting means is not limited. The washing 2 is inserted by the water flow nature member 201 and both the band-like members 202 and 203, and let a part of contact section [at least] with the washing 2 of the water flow nature member 201 be the free end of the shape of a cantilever in which connection for the washing 2 is possible. As for each band-like members 202 and 203, it is desirable to be constituted by the member which has water flow nature, such as a network and the same foamed plastics as the water flow nature member 201. While the water flow nature member 201 and both the band-like members 202 and 203 are rolled in the shape of a roll in one in the condition of having piled up with the washing 2, like the 2nd operation gestalt, being turned up in one or being wound in the shape of a roll in one, it is turned up, and it is regulated with the rubber band 115 that it can extend, and, thereby, it can cover the washing 2 by the water flow nature member 201. Other configurations and an effect are made to be the same as that of the 2nd operation gestalt.

[0017] (3) of drawing 5 shows the auxiliary implement 301 for wash of the 4th operation gestalt of this invention. The auxiliary implement 301 for wash is equipped with the water flow nature member 302 of the shape of a sheet to which a periphery meets a rectangle. The periphery of the left which meets drawing Nakagami down in one field of the water flow nature member 302, Along the left half of two peripheries in alignment with the longitudinal direction in drawing, the male flank material 304 of a field-like fastener is attached, and the female flank material 305 of a field-like fastener is attached along the periphery of the method of the right in alignment with drawing Nakagami down, and the right half of two peripheries in alignment with the longitudinal direction in drawing. By making it double fold by this along with fold Y which shows the water flow nature member 302 according to the two-dot chain line in drawing, connecting the male flank material 304 and the female flank material 305 of a field-like fastener, and closing a periphery, it can be made saccate and the washing 2 arranged in the storage space of the interior can be covered. In addition, the means closed possible [disconnection of the periphery of the water flow nature member 301] is not limited to a field-like fastener. The water flow nature member 301 is made into the product made from foamed plastics which has the open cell distributed in the main part of plastics like each above-mentioned operation gestalt, and let a part of contact section [at least] with the washing 2 of the main part of plastics be the free end of the shape of a cantilever in which connection for the washing 2 is possible. While the water flow nature member 301 is rolled in the shape of a roll in one in the condition of having piled up with the washing 2, like the 2nd operation gestalt, being turned up in one or being wound in the shape of a roll in one, it is turned up, and it is regulated with the rubber band 115 that it can extend, and, thereby, it can cover the washing 2 by the water flow nature member 301. Other configurations and an effect are made to be the same as that of the 2nd operation gestalt.

[0018] This invention is rolled in the shape of a roll in one, where the auxiliary implement 101 for wash

of the 1st operation gestalt is piled up with the washing 2 like the 2nd operation gestalt. Or turn up in one, or while winding in the shape of a roll in one, it turns up. You may wash, where it is regulated that it can extend, and you may wash, without turning up in one in winding in the shape of a roll, or turning up, while rolling in one the auxiliary implement 301 for wash which contained the washing 2 of the 4th operation gestalt in the shape of a roll. Moreover, mold collapse of the washing may be more certainly prevented by attaching the hanger which hooks the washing on a water flow nature member.

[0019]

[Effect of the Invention] According to this invention, the auxiliary implement for wash of the low cost which can prevent generating of the contraction of the washing or a wrinkling can be offered.

[0020]

[Example] Contraction of the washing when washing a commercial woman wool yarn 100% sweater (size M, round-neck) was investigated using the auxiliary implement for wash of an example and the auxiliary implement for wash of the example of a comparison by experiment 1 this invention. Having the configuration shown in the 1st operation gestalt as an auxiliary implement for wash of an example, the 1st and the 2nd copy aquosity member are the products made from polyether system foaming urethane foam, respectively, and used the thing of the bulk density with which the breadth of 45cm, the dip of 60cm, and thickness are 8mm, and were indicated to be to a table 1, and A-H which has the number of air bubbles. Moreover, the configuration made the thing made from the nylon network of the former [thickness / the 1st operation gestalt, and / the same and thickness / member / 0.4mm and / each / water flow nature] the example a of a comparison as an auxiliary implement for wash of the example of a comparison.

[0021] Wash was repeated 3 times on condition that the following.

(Washing conditions) washing machine: -- Matsushita Electric Industrial Co., Ltd. -- about NA-F60K2 and water -- : -- desiccation condition: the temperature of 20 degrees C and 65% of humidity RH of low-water level, the wash course: restroom course of a washing machine, detergent: marketing neutral liquid detergent, detergent concentration: 0.133wt%, use water: tap water (temperature of 20 degrees C), and garments -- 36 hours.

[0022] Contraction of the washing was made into the average of the width of a garment of a sweater, length, and contraction of the skirt. Contraction like each part of the washing made length after L and wash L', and found the width of a garment of the sweater, length, and the length before wash of the skirt from the degree type. Contraction searched for is shown in a table 1.

Contraction (%) = $(L - L') / L \times 100$ [0023] The detergency when washing using the auxiliary implement for wash of example A-H of the experiment 2 experiment 1 and the auxiliary implement for wash of the example a of a comparison was investigated. The washing with which at least each part of a commercial woman wool yarn 100% sweater (size M, round-neck) sewed on (a neck, a sleeve, a collar, a breast, and the skirt) ten artificial solid fabrics adjusted by the following method was used. Moreover, the artificial solid fabric was prepared by making the artificial-pollution liquid of the following presentation adhere to cloth using a gravure roll coater. The production process which prepares an artificial solid fabric performed in with a cel capacity [of a gravure roll] of 58cm³ / m², spreading speed 1.0 m/min and drying temperature of 100 degrees C, and drying-time 1 minute. Cloth used cotton calico 2003 cloth (made in the Yagashira store).

(Presentation of artificial-pollution liquid) Lauric acid 0.44 % of the weight, myristic acid 3.09 % of the weight, 2.31 % of the weight of pentadecane acids, palmitic acid 6.18 % of the weight, heptadecanoic acid 0.44 % of the weight, stearin acid 1.57 % of the weight, oleic acid 7.75 % of the weight, triolein acid 13.06 % of the weight, palmitic-acid n-hexadecyl 2.18 % of the weight, squalene 6.53 % of the weight, albumen lecithin liquid crystal object 1.94 % of the weight, 8.11 % of the weight of Kanuma red clay, carbon black 0.01 % of the weight, tap water It is balance.

[0024] Wash was performed on the same conditions as experiment 1. Moreover, the detergency (%) measured the reflection factor in 550nm of the original cloth before contamination, and the contamination cloth before and behind washing with the colorimetry color difference meter (Nippon Denshoku Model Z-300A), and asked for it by the degree type. The detergency (%) was made into the

average of the rate of washing of ten artificial solid fabrics here. The rate of washing for which it asked is shown in a table 1. Rate (%) of washing = (reflection factor before reflection factor-washing after washing) x100/(reflection factor before reflection factor-washing of a original cloth)

[0025] It was the auxiliary implement for wash of the configuration shown in the experiment 3 2nd operation gestalt, and the 1st copy aquosity member was made into the periphery side, each water flow nature member and the washing were rolled in one, it was made the shape of a roll, and thing I-R which regulated that a rubber band could be twisted and opened was used. As each water flow nature member, I-P used the product made from foaming polyurethane, and Q and R used the product made from a foaming polypropylene bilene. For 68cm and thickness, the maximum gap D1 in the drawing Nakagami edge of periphery 112a of 8mm and the 2nd copy aquosity member 112 and periphery 122a of the 3rd copy aquosity member 122 is [the breadth / in / in the size of the auxiliary implement for wash of this example I-R / (1) of drawing 5 / W / 49cm and a dip H / the maximum lap size D2 in 16cm and a drawing Nakashita edge] 6cm. As an auxiliary implement for wash of the example of a comparison, the auxiliary implement for wash and configuration of the example a of a comparison were the same, they rolled each water flow nature member and the washing in one, made them the shape of a roll, and made what regulated that a rubber band could be twisted and opened the example b of a comparison. Others investigated contraction of the washing on the same conditions as experiment 1. Contraction searched for is shown in a table 1.

[0026] Others investigated the detergency of the washing on the same conditions as an example 2 using what [b] is the same as that of an example 3 as an auxiliary implement for wash of the example of a comparison, using the same thing I-R of an example 3 as an auxiliary implement for wash of experiment 4 example. The detergency for which it asked is shown in a table 1.

[0027]

[A table 1]

	ネットの高密度 (kg/m ³)	気泡数 (個/25mm)	収縮率 (%)	洗浄力 (%)
実施例 A	30	8±3	2.36	11.2
B	30	13±3	1.81	9.6
C	30	20±4	1.75	9.8
D	30	30±4	1.73	9.1
E	30	40±4	1.74	8.9
F	30	50±5	1.72	8.7
G	57	55±5	1.70	8.6
H	80	80±10	1.68	8.0
比較例 a		(網目数) 8±1	4.20	9.2
実施例 J	30	8±3	1.69	10.96
J	30	13±3	1.32	9.39
K	30	20±4	1.28	9.59
L	30	30±4	1.27	8.90
M	30	40±4	1.27	8.71
N	30	50±5	1.26	8.51
O	57	55±5	1.24	8.41
P	80	80±10	1.23	7.83
比較例 b		(網目数) 8±1	1.80	4.30
実施例 Q	30	20±5	1.28	9.60
R	40	40±6	1.24	8.85

[0028] From a table 1, by the usual wash method using the conventional auxiliary implement for wash which is the example a of a comparison, contraction of a sweater is very bad and is not fit for practical use. Detergency sufficient by the method of making a sweater into the shape of a roll and on the other hand washing it using the conventional auxiliary implement for wash which is the example b of a comparison cannot be obtained. On the other hand, according to the example of this invention, it has checked that contraction of the washing could be prevented rather than the example of a comparison in addition to a good detergency.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] Front view of the auxiliary implement for wash of the 1st operation gestalt of this invention

[Drawing 2] (1) is the sectional side elevation of the auxiliary implement for wash of the 1st operation gestalt of this invention, and (2) is the sectional side elevation of the auxiliary implement for wash of the modification of the 1st operation gestalt of this invention.

[Drawing 3] The expansion cross-sectional view of the important section of the auxiliary implement for wash of the 1st operation gestalt of this invention

[Drawing 4] The enlarged vertical longitudinal sectional view of the important section of the auxiliary implement for wash of the 1st operation gestalt of this invention

[Drawing 5] For the front view of the auxiliary implement for wash of the 2nd operation gestalt of this invention, and (2), the front view of the auxiliary implement for wash of the 3rd operation gestalt of this invention and (3) are [(1)] the front view of the auxiliary implement for wash of the 4th operation gestalt of this invention.

[Drawing 6] For (1) of the auxiliary implement for wash of the 2nd operation gestalt of this invention, (2) is drawing showing a busy condition, and drawing showing another busy condition.

[Description of Notations]

5, 6, 102, 112, 122, 201, 302 Water flow nature member

10 Main Part of Plastics

10' Cantilever-like free end

11 Open Cell

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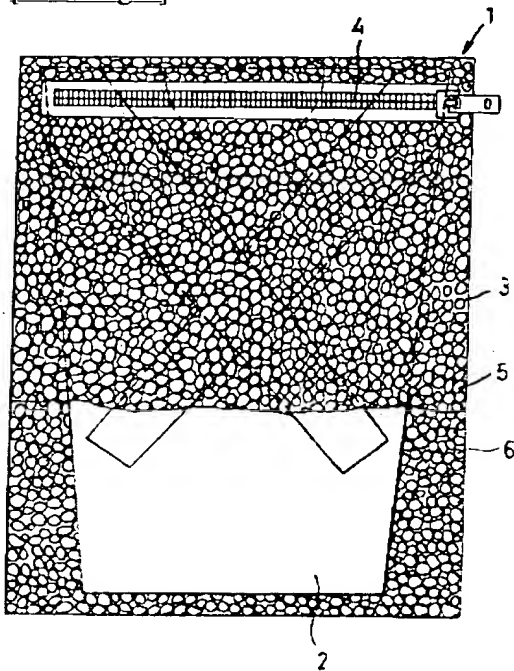
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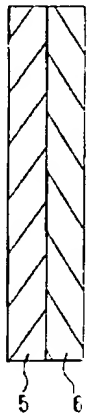
DRAWINGS

[Drawing 1]

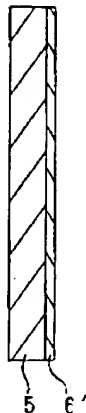


[Drawing 2]

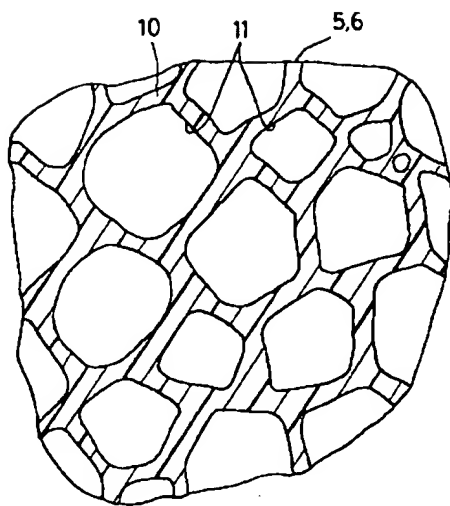
(1)



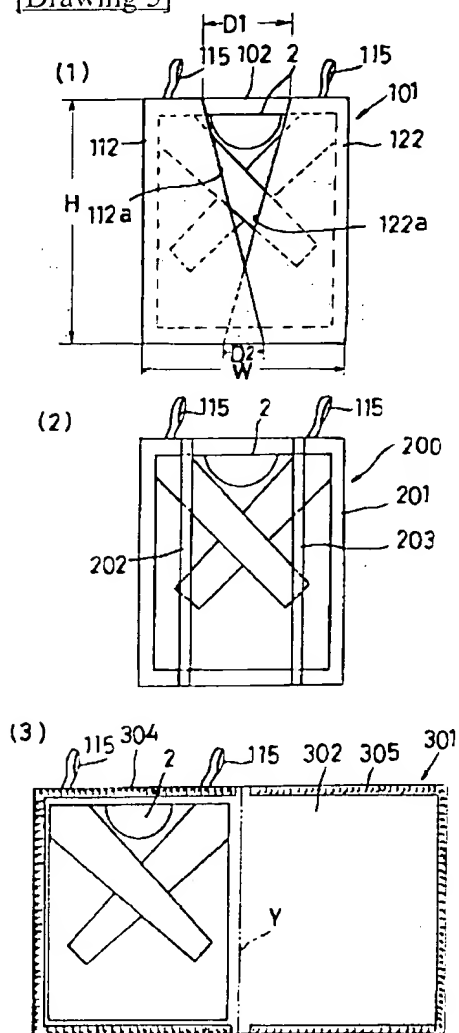
(2)



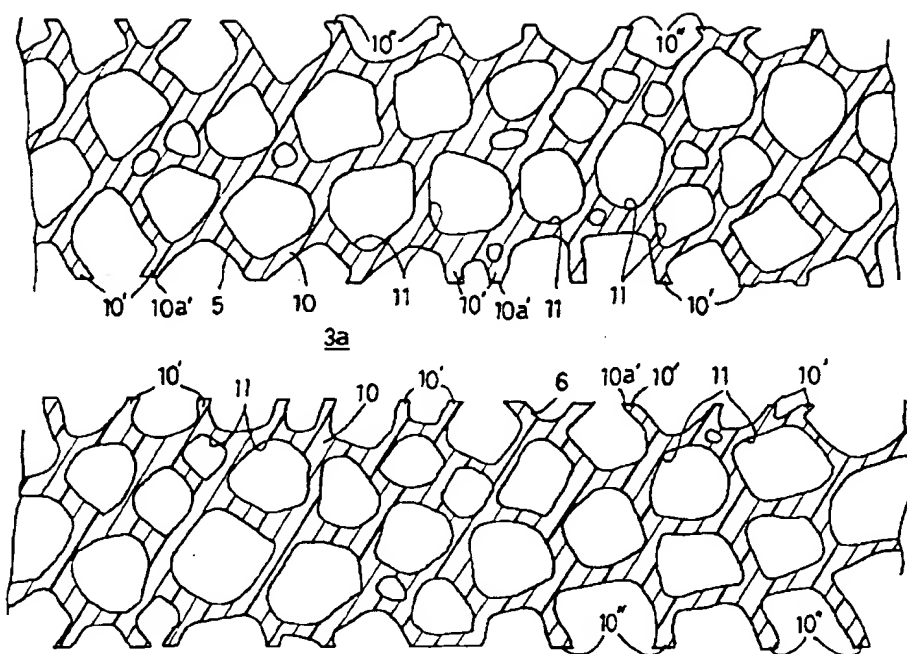
[Drawing 3]



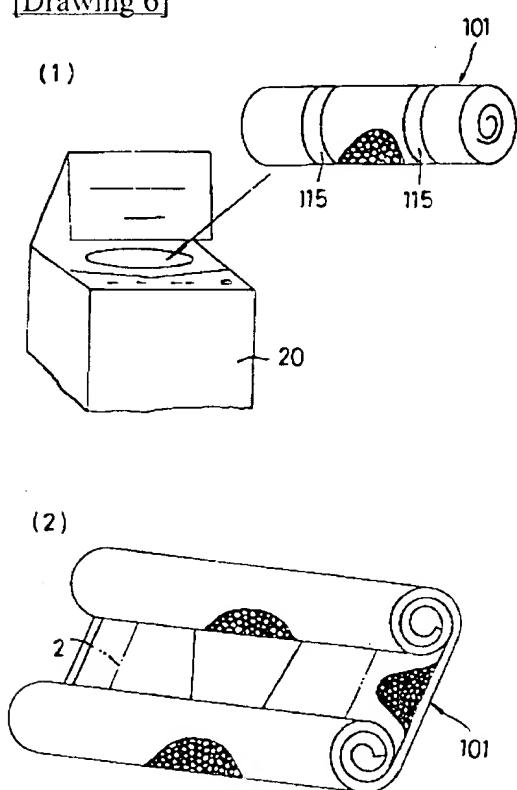
[Drawing 5]



[Drawing 4]



[Drawing 6]



[Translation done.]